

Author Index to Volume 3

- Abdallah, E. A. F.**
—; Mitkees, A. A.; Hamdy, S. A.; Elsohly, A. A.: Propagation Constant of Microstrip Leaky-Wave Antennas, 435
- Abiri, H.** See Moheimany, O. R., 372
- Abushagur, M. A. G.**
Error Effects on the Processing of Adaptive Array Data Using the BOC, 21
- Acosta, R.** See Zimmerman, M., 233
- Ackerman, E.** See Kasemset, D., 335
- Alehasin, M.** See Moheimany, O. R., 372
- Altman, Z.**
—; Cory, H.; Leviatan, Y.: Cutoff Frequencies of Dielectric Waveguides Using the Multifilament Current Model, 294
- Ampole, N.** See Bhanthumnavin, V., 239
- Andricos, C.** See Willems, D., 111
- Bahl, I.** See Willems, D., 111
- Bakalidis, G. N.**
—; Georgopoulos, C. J.: Mechanical Displacement Measurement by Single-Mode Fiber Optic and Moving Mirror, 27
- Barsotti, E. L.**
Effect of Metallization Edge Shape on Conductor Loss of Open Coplanar Waveguide, 389
- Betti, S.**
—; De Marchis, G.; Iannone, E.; Todaro, M.: Crosstalk in a DPSK FDM System Affected by Laser Phase Noise, 141
- Bernard, J. E.**
—; Chrostowski, J.; Wartak, M. S.: A Balanced Optical Interferometric Sensor with a Wavelength-Dependent Offset, 427
- Bernardi, P.**
—; Cicchetti, R.: A Design Technique for Minimizing the Electromagnetic Interference Induced along a Microstrip Line by External Sources, 235
- Beyer, J. B.** See Martens, J.S., 49
- Bhasin, K. B.** See Miranda, F. A., 11
- Bhanthumnavin, V.**
—; Ampole, N.: Theoretical Prediction of Nonlinear Brewster Angle in ADP, 239
—; Lee, C.H.: Reflection and Transmission in Second Harmonic Generation of Light in KDP Crystal, 279
- Bhasin, K. B.** See Romanofsky, R. R., 117
- Bhattacharyya, A.** See Ghaderi, M., 370
- Bhattacharyya, A. K.**
Approximate Formulae for the Surface Wave Numbers in a Grounded Dielectric Structure, 169
Radar Cross Section Reduction of a Flat Plate by RAM Coating, 324
- Bosisio, R. G.** See Karam, M., 181; Larose, R., 244; Ongareau, E., 317; Xu, Y., 74
- Brandão Faria, J. A.**
Changes in the Band Structure Pattern of Microstrip Filters Due to Gap Capacitive Effects, 205
Normal Mode Analysis of Asymmetrical Two-Line Microstrip Circuits Using a Perturbation Approach, 366
- Brophy, T. J.** See Ryley, J. F., 83
- Cáceres, J. L.**
—; Pérez, J.: Enhanced Scheme for the Small-Signal Physical Simulation of MESFETs, 154
- Cameron, K.** See Ghafouri-Shiraz, H., 214
- Champlin, K. S.** See Singh, D. R., 382
- Chan, C. H.** See Lou, S. H., 150
- Chang, D. C.** See Hoorfar, A., 31
- Chang, H.-c.**
—; Huang, H. S.; Wang, Y.-C.: On the Various Forms of the Coupled-Mode Theory for Optical Waveguides, 296
- Chang, T.-N.** See Tan, C.-H., 268
- Cheng, F.**
—; Xu, X.; Wu, S.; Yu, F. T. S.; Gregory, D. A.: Restoration of Blurred Images Due to Linear Motion Using a Joint Transform Processor, 24
- Cheng, K. K. M.**
—; Everard, J. K. A.: Compact Semi-Lumped Element Microwave Bandpass Filter with Harmonic Suppression, 212
- Cheng, Y.**
—; Lin, W.: Dispersion Characteristics of Optical Dielectric Waveguides, 419
- Chew, W. C.**
A Derivation of the Vector Addition Theorem, 256
Correction to "A Derivation of the Vector Addition Theorem," 446
—; Nie, Z.; Lo, Y. T.: The Effect of Feed on the Input Impedance of a Microstrip Antenna, 79
—; Wang, Y. M.: A Fast Algorithm for Solution of a Scattering Problem Using a Recursive Aggregate-Matrix Method, 164
—; See Wang, Y. M., 102
- Chinn, S.** See Kasemset, D., 335
- Chorey, C. M.** See Miranda, F. A., 11
- Choudhury, D.**
—; Mahapatra, S.: A GaAs Directional Coupler, 70
—; Mahapatra, S.: Performance Evaluation of Two Passive MMIC Components, 127
- Chowdhury, S. K.**
Reply of the Authors on "Characteristic Impedance of a Curved Microstrip Transmission Line," 192
—; See Roy, J. S., 119
- Christodoulou, C. G.** See Dunn, D. S., 172; Uhing, J., 290
- Chrostowski, J.** See Bernard, J. E., 427
- Chu, C. Y. J.** See Ghafouri-Shiraz, H., 144
- Cicchetti, R.** See Bernardi, P., 235
- Coetzee, J. C.**
—; Malherbe, J. A. G.: A Hybrid Near-Optimum Impedance Transition with One Discontinuity, 249
—; Malherbe, J. A. G.: Characteristic Impedance for Double-Sided Slotlines, 85

- Coluzzi, M.** See Willems, D., 111
- Corkish, R.**
The Use of Conical Tips to Improve the Impedance Matching of Casegrain Subreflectors, 310
- Corzani, T.** See Vescovo, R., 124
- Cory, H.** See Altman, Z., 294
- Crosnier, Y.** See Temcamani, F., 195
- D'Agostino, S.**
—; D'Inzeo, G.; Lambertucci, G.; Marietti, P.; Panariello, G.: A Novel Application in Matrix Distributed Amplifier: The Forward-Feed, 354
- Davidson, F. M.** See Gilbreath, G. C., 217; Gilbreath, G. C., 445
- Davis, M. L.** See MacDonald, A. D., 221
- Decoster, D.** See Elkadi, H., 379; Gouy, J. P., 47
- De Marchis, G.** See Betti, S., 141
- Demers, Y.** See Karam, M., 181
- de Salles, A. A.**
Optical Effects in HEMTs, 350
- D'Inzeo, G.**
—; Giusto, R.; Petrachi, C.: Active Devices for Microwave Distributed Amplification, 51
—; See D'Agostino, S., 354
- Dunn, D. S.**
—; Dunn, G. L.; Christodoulou, C. G.: A Simple X-Band Waveguide-to-Microstrip E-Probe Transition, 172
- Dunn, G. L.** See Dunn, D. S., 172
- Dunn, J. M.** See Barsotti, E. L., 389
- Dutta, A.**
—; Mukhopadhyay, D.: Harmonic Generation in II-VI Compound Semiconductors under Hot Electron Condition, 386
- East, J. R.** See Mehdi, I., 1
- Ebihara, B. T.** See Miranda, F. A., 11
- Elaoud, M.**
—; Seshadri, S. R.: Cutoff Attenuator for Azimuthally Symmetric Transverse Electrical Mode in a Cylindrical Waveguide, 95
—; Seshadri, S. R.: Cutoff Attenuator for Azimuthally Symmetric Transverse Magnetic Mode in a Cylindrical Waveguide, 424
- Elcrat, A. R.**
—; Harder, T. M.; Stonebraker, J. T.: Scattering of a TEM Wave from a Time Varying Surface, 98
- Elkadi, H.**
—; Vilcot, J. P.; Maricot, S.; Decoster, D.: Microwave Circuit Modeling for Semiconductor Lasers under Large and Small Signal Conditions, 379
- El-Rabaie, S.**
Simulation of Nonlinear Circuits Using Modified Harmonic Balance Techniques, 13
- Elsohly, A. A.** See Abdallah, E. A. F., 435
- Engvik, A. H.** See Loos, J. S., 229
- Everard, J. K. A.** See Cheng, K. K. M., 212
- Fares, D. A.**
Performance of Convolutional Codes in Noisy Optical Channels, Using an APD-Viterbi Decoder Receiver, 112
Performance of Convolutional Codes with Multipulse Signaling in Optical Channels, 406
- Fatah, R. M. A.** See Ghafouri-Shiraz, H., 214
- Fralich, R.** See Wu, C., 400
- Fukai, I.** See Kashiwa, T., 203; Kashiwa, T., 416
- Fusco, V. F.** See Linden, P. A., 343
- Georgopoulos, C. J.** See Bakalidis, G. N., 27
- Ghaderi, M.**
—; Bhattacharyya, A.: Investigations on Planar Periodic Structures with Uniform Microstrip Lines, 370
- Ghafouri-Shiraz, H.**
—; Cameron, K.; Fatah, R. M. A.: Achievement of Low Coupling Loss Between a 1.55- μ m Wavelength Laser Diode and a High NA MCVD Single-Mode Fiber by Conical Microlens, 214
—; Chu, C. Y. J.: On Phase-Shift Position and Linewidth of $\lambda/4$ -Shifted DFB Laser Diodes, 144
—; Gong, J.: Analysis of a Gaussian Model for the Far-Field Intensity Pattern of Laser Diodes, 404
- Ghannouchi, F. M.** See Larose, R., 244; Ongareau, E., 317
- Gilbreath, G. C.**
—; Davidson, F. M.: Corrections to "Effects of Multi-Pump Beam Coupling on Intensity Enhancement of a Probe Beam in Photorefractive Two-Wave Mixing," 445
—; Davidson, F. M.: Effects of Multi-Pump Beam Coupling on Intensity Enhancement of a Probe Beam in Photorefractive Two-Wave Mixing, 217
- Ginley, D. S.** See Martens, J. S., 49
- Giusto, R.** See D'Inzeo, G., 51
- Gong, J.** See Ghafouri-Shiraz, H., 404
- Gordon, R. K.** See Joseph, J., 146
- Gordon, W. L.** See Miranda, F. A., 11
- Gouy, J. P.**
—; Vilcot, J. P.; Decoster, D.; Riglet, P.; Patillon, J. N.; Martin, G.: Microwave Noise Performance and Frequency Response of PIN GaInAs Photodiodes, 47
- Gouzien, P.** See Soares, R., 210
- Gregory, D. A.** See Cheng, F., 24
- Gupta, G. S.**
—; Nguyen, D. N.; Huang, C. C.: Analysis and Optimization of High Performance Antenna Feed, 286
- Gupta, K. C.** See Hoorfar, A., 31
- Habibzadeh, A.** See Rahnavard, M. H., 42
- Haddad, G. I.** See Mehdi, I., 1
- Haldar, M. K.**
—; Mendis, F. V. C.; Kooi, P. S.: Prediction of Harmonic Distortion in Semiconductor Lasers Driven below the Threshold, 260
- Hamdy, S. A.** See Abdallah, E. A. F., 435
- Hansen, R. C.**
Antenna Mode and Structural Mode RCS: Dipole, 6
- Harder, T. M.** See Elcrat, A. R., 98
- Heinen, V. O.** See Miranda, F. A., 11

- Herczfeld, P. R.** See Madjar, A., 60; Ryley, J. F., 83
- Hofer, W. J. R.** See Uher, J., 411
- Hoorfar, A.**
—; Gupta, K. C.; Chang, D. C.: Radiation and Surface Waves of a Microstrip Antenna Covered with a Dielectric Layer, 31
- Houshmand, B.** See Zimmerman, M., 233
- Hu, L.** See Luo, X. B., 116
- Huang, C. C.** See Gupta, G. S., 286
- Huang, H. S.** See Chang, H.-c., 296
- Huang, K.**
—; Lin, W.: Influence of TEM Waves on Dielectric Encapsulated Semiconductor Devices, 388
- Huang, Y.**
—; Xue, L.; Lin, W.: Accurate Solutions for Planar Transmission Lines by an Improved Singular Integral Equation Technique, 208
—; Xue, L.; Lin, W.: The Singular Integral Equation Technique for Planar Transmission Lines, 157
- Huret, F.**
—; Pribetich, P.; Kennis, P.: Quasicomplex Modes on Lossy Substrate Boxed Microstrip Lines, 439
—; See Kinowski, D., 338
- Iannone, E.** See Betti, S., 141
- Ibarra, J.** See Ojeda-Castañeda, J., 276
- Ikäläinen, P.**
An Optimized Forward-Coupling Microstrip Hybrid for Millimeter-Wave Circuits, 88
- Imaoka, T.**
A New Evaluation Method for FT Characteristics of Varactor Diodes, 38
- Ishii, T. K.** See Taalbi, M., 303
- Ishimaru, A.** See Lou, S. H., 150
- Jackson, D. R.** See MacDonald, A. D., 221
- Jacobs, J. P.** See McNamara, D. A., 106
- Janse van Rensburg, D.**
—; McNamara, D. A.: On Quasi-Static Source Models for Wire Dipole Antennas, 396
- Jia, S.**
The New Method of Measuring the RCS of a Target by Means of the Six-Port Reflectometer, 398
- Jiang, P.** See Zhang, X., 313
- Jin, H.** See Lin, W., 130, 176
- Joseph J.**
—; Gordon, R. K.; Mittra, R.: A Finite-Difference Frequency-Domain Approach for Solving Electromagnetic Scattering by Conducting Bodies of Revolution, 146
- Karam, M.**
—; Demers, Y.; Xu, Y.; Bosisio, R. G.: Theory and Design of Wideband 3-dB Suspended Microstrip Couplers with Floating Conductor, 181
- Kasemset, D.**
—; Ackerman, E.; Chinn, S.; Wanuga, S.; Krol, M.; Stacy, J.: Microwave Optical Characterization of High-Speed Photodetectors Utilizing Mode-Locked, Pulse-Compressed 1.3-Micron Solid-State Laser, 335
- Kashiwa, T.**
—; Fukai, I.: A Treatment by the FD-TD Method of the Dispersive Characteristics Associated with Electronic Polarization, 203
—; Ohtomo, Y.; Fukai, I.: A Finite-Difference Time-Domain Formulation for Transient Propagation in Dispersive Media Associated with Cole-Cole's Circular Arc Law, 416
- Kasraian, M.**
—; Seshadri, S. R.: Effect of a Parasitic Mode on the Characteristics of a Cylindrical Waveguide Mode Converter with Harmonically Varying Radius, 359
—; Seshadri, S. R.: Effect of a Parasitic Mode on the Performance of a Serpentine Waveguide Mode Converter, 224
- Kejian, G.**
—; Yizun, W.: An Improved All-Fiber 90° Optical Hybrid, 122
- Kennis, P.** See Huret, F., 439; Kinowski, D., 338; Pribetich, J., 177
- Kidner, C.** See Mehdi, I., 1
- Kim, S.-Y.** See Suh, K.-W., 362
- Kinowski, D.**
—; Huret, F.; Seguinot, C.; Pribetich, P.; Kennis, P.: Performance of Superconducting Interconnections, 338
- Knop, C. M.**
A Note on the Use of a Beam-Waveguide Feed System as a Phase Shifter for High Power Microwave Dual-Reflector Antennas, 263
- Kolipara, R. T.**
—; Tripathi, V. K.: Quasi-TEM Spectral Domain Technique for Multiconductor Structures with Rectangular and Trapezoidal Conductor Cross Sections, 4
- Kooi, P. S.** See Haldar, M. K., 260
- Kot, J. S.**
Solution of Thin-Wire Integral Equations by Nystrom Methods, 393
- Krol, M.** See Kasemset, D., 335
- Kuester, E. F.** See Barsotti, E. L., 389
- Kuti, Cs.**
—; Turi, L.; Yan, L.; Lee, C. H.: High-Efficiency Diffraction Modulation of Light by Strain-Optic Effect of Piezoelectrically Induced Standing Acoustic Waves in Bulk LiNbO₃ Crystal, 193
- Lambertucci, G.** See D'Agostino, S., 354
- Larose, R.**
—; Ghannouchi, F. M.; Bosisio, R.: A Method for Optimizing Efficiency and Power Dissipations in High Power Microwave/Millimeter-Wave Amplifiers, 244
- Lee, C. H.** See Bhanthumnavin, V., 279
- Lee, C. H.** See Kuti, Cs., 193
- Lee, K. F.** See Lee, R. Q., 199
- Lee, R. Q.**
—; Lee, K. F.: A 16 × 16 Microstrip Array of Electromagnetically Coupled Patches Operating in the High-Grain Region, 199
- Lee, S. W.** See Zimmerman, M., 233

- Leviatan, Y.** See Altman, Z., 294
- Levine, E.**
- ; Shtrikman, S.: Experimental Comparison between Four Dual-Polarized Microstrip Antennas, 17
- Lichtenberg, C. L.** See MacDonald, A. D., 221
- Lin, C. C.**
- Experimental Determination of the Resonance Frequencies of Suspended-Substrate Microstrip Antennas, 66
- Lin, M. S.** See Loos, J. S., 229
- Lin, W.**
- ; Jin, H.: Green's Function for the Poisson Equation in the Domains Bounded by Two Intersecting Spheres, 130
 - ; Jin, H.: Solutions to the Electrostatic Problems of a Dielectric Sphere Resting on a Conducting Plane by Inversion Transformation Method, 176
 - ; See Cheng, Y., 419; Huang, K., 388; Huang, Y., 157, 208; Luo, X. B., 116; Wang, B. Z., 256
- Lindell, I. V.** See Oksanen, M., 160
- Lindell, I. V.** See Viitanen, A. J., 62
- Linden, P. A.**
- ; Fusco, V. F.: MESFET Small Signal Transfer Functions, 343
- Lin-Hendel, C. G.** See Loos, J. S., 229
- Lippens, D.** See Temcamani, F., 195
- Litva, J.** See Wu, C., 400
- Liu, L.** See Zhang, L., 242
- Lo, Y. T.** See Chew, W. C., 79
- Long, S. A.** See MacDonald, A. D., 221
- Loos, J. S.**
- ; Engvik, A. H.; Lin, M. S.; Lin-Hendel, C. G.: Measurements of Signal Transmission to 20 GHz and Crosstalk to 10 GHz on Small Copper Microstrips Embedded in Polyimide Dielectric, 229
- López-Olazagasti, E.** See Ojeda-Casteñada, 375
- Lou, S. H.**
- ; Tsang, L.; Chan, C. H.; Ishimaru, A.: Monte Carlo Simulations of Scattering of Waves by a Random Rough Surface with the Finite Element Method and the Finite Difference Method, 150
- Luk, K. M.** See Tam, W. Y., 391
- Luo, X. B.**
- ; Hu, L.; Lin, W. G.: Very High-Isolation All-Fiber Wavelength-Division Multi/Demultiplexer, 116
- Macchiarella, G.**
- ; Politi, M.: Graphical Tools for Designing Low-Noise Microwave Amplifiers with Requirements on the Input VSWR, 384
- MacDonald, A. D.**
- ; Long, S. A.; Williams, J. T.; Jackson, D. R.; Lichtenberg, C. L.; Davis, M. L.; Wosik, J. L.; Wolfe, J. C.: Microwave Characterization of High-Temperature Superconducting Thin Films Using Stripline Resonators, 221
- Madjar, A.**
- ; Herczfeld, P. R.; Paolletta, A.: Photoavalanche Effects in a GaAs MESFET, 60
- Mahapatra, S.** See Choudhury, D., 70., 127
- Mäki, H.** See Oksanen, M., 160
- Malherbe, J. A. G.** See Coetzee, J. C., 85; 249
- Maricot, S.** See Elkadi, H., 379
- Marietti, P.** See D'Agostino, S., 354
- Martens, J. S.**
- ; Beyer, J. B.; Nordman, J. E.; Ginley, D. S.: A Broadband Microwave Linear Phase Modulator Made of High T_c Superconductors, 49
- Martin, G.** See Gouy, J. P., 47
- Martinez, J. C.** See Romanofsky, R. R., 117
- McNamara, D. A.**
- ; Jacobs, J. P.: The Utilization of Nonuniform Spacings for Improved Two-Section Monopulse Array Performance, 106
 - ; See Janse van Rensburg, D., 396
- Mehdi, I.**
- ; Kidner, C.; East, J. R.; Haddad, G. I.: Millimeter-Wave Detection Using Resonant Tunneling Diodes, 1
- Mendis, F. V. C.** See Haldar, M. K., 260
- Meszaros, S.** See Soares, R., 210
- Michalski, K. A.** See Zheng, D., 200
- Mitra, R.** See Joseph, J., 146
- Miranda, F. A.**
- ; Gordon, W. L.; Bhasin, K. B.; Ebihara, B. T.; Heinen, V. O.; Chorey, C. M.: Complex Permittivity of Lanthanum Aluminate in the 20 to 300 K Temperature Range from 26.5 to 40.0 GHz, 11
- Mitkees, A. A.** See Abdallah, E. A. F., 435
- Moheimany, O. R.**
- ; Rahnavard, M. H.; Abiri, H.; Alehassin, M.: Tunability of Cascaded Grating Used in Distributed Feedback Laser, 372
- Mukhopadhyay, D.** See Dutta, A., 386
- Nevels, R. D.**
- ; Wheeler, J. E.: Near Field Radiation from Four Coaxial Line Fed Structures, 90
- Nguyen, C.**
- On the Analysis of Parallel Coupled Transmission Lines in an Inhomogeneous Medium, 308
- Nguyen, D. N.** See Gupta, G. S., 286
- Nie, Z.** See Chew, W. C., 79
- Nordman, J. E.** See Martens, J. S., 49
- Noyola-Iglesias, A.** See Ojeda-Casteñada, J., 430
- Ohtomo, Y.** See Kashiwa, T., 416
- Ojeda-Casteñada, J.**
- ; Ibarra, J.: Space-Variant Aberrations; Differential Operator, 276
 - ; López-Olazagasti, E.: Ray Trajectories and Caustic: Clairaut's Equation, 375
 - ; Noyola-Iglesias, A.: Nondiffracting Wavefields in GRIN and Free-Space, 430
- Oksanen, M.**
- ; Mäki, H.; Lindell, I. V.: Nonstandard Variational Method for Calculating

- Attenuation in Optical Fibers, 160
- Ongareau, E.**
—; Ghannouchi, F. M.; Bosio, R. G.: Harmonic Device Line Simulation of Negative Resistance Microwave MESFET Oscillators, 317
- Pal, B. P.** See Tewari, R., 305
- Paollela, A.** See Madjar, A., 60
- Panariello, G.** See D'Agostino, S., 354
- Patillon, J. N.** See Gouy, J. P., 47
- Pérez, J.** See Cáceres, J. L., 154
- Petrachi, C.** See D'Inzeo, G., 51
- Poddar, D. R.** See Roy, J. S., 119
- Politi, M.** See Macchiarella, G., 384
- Pollman, M.** See Willems, D., 111
- Pribetich, J.**
—; Kennis, P.; Pribetich, P.: Modelling Microstrip Resonators with a Dielectric Protective Layer for Biomedical Applications, 177
- Pribetich, P.** See Huret, F., 439; Kinowski, D., 338; Pribetich, J., 177
- Ra, J. W.** See Suh, K.-W., 362
- Rahmat-Samii, Y.** See Zimmerman, M., 233
- Rahnavard, M. H.**
—; Habibzadeh, A.: Total Reflected Millimeter-Wave Power from Moving Strip Illuminated Semiconductor Panel, 42
—; Rusch, W. V. T.: Total field evaluation near the Edge Shadow of an Idealized Inflected Surface, 327
—; See Moheimany, O. R., 372
- Raman, S.** See Tsay, J., 54
- Riglet, P.** See Gouy, J. P., 47
- Rollman, J. A.**
—; Wahid, P. F.: Ka-Band Monolithic GaAs MESFET Amplifier Design, 273
- Romanofsky, R. R.**
—; Martinez, J. C.; Viergutz, B. J.; Bhasin, K. B.: Ka-Band Propagation Characteristics of Microstrip Lines on GaAs Substrates at Cryogenic Temperatures, 117
- Rong, A. S.**
A Simple and Efficient Formulation for the Transmission Characteristics of Generalized Suspended Striplines, 433
- Rong, Y.**
The Bandwidth Characteristics of Ridged Circular Waveguides, 347
- Roy, J. S.**
—; Poddar, D. R.; Chowdhury, S. K.: Broadband Design of Ring Type Microstrip Power Divider, 119
- Roy, R.**
Power Stored in the Evanescent Modes of a Rectangular Waveguide Generated by a Narrow Inclined Sidewall Slot, 132
- Rusch, W. V. T.** See Rahnavard, M. H., 327
- Ryley, J. F.**
—; Herczfeld, P.; Brophy, T. J.: Organic-on-Inorganic Guided Wave Modulator, 83
- Salmer, G.** See Temcamani, F., 195
- Schöön, M.**
Comments on "Characteristic Impedance of a Curved Microstrip Transmission Line", 191
- Schwarz, S. E.** See Tsay, J., 54
- Seguinot, C.** See Kinowski, D., 338
- Seshadri, S. R.** See Elaoud, M., 95, 424; Kasraian, M., 224, 359
- Shillue, W. P.**
—; Stephan, K. D.: A Technique for the Measurement of Mutual Impedance of Monolithic Solid-State Quasioptical Oscillators, 414
- Shtrikman, S.** See Levine, E., 17
- Sihvola, A. H.** See Viitanen, A. J., 62
- Singh, D. R.**
—; Champlin, K. S.: Quasi-TEM Analysis of a Monolithic Microwave GaAs Phase Shifter, 382
- Singh, H.** See Tewari, R., 305
- Smith, J. S.** See Tsay, J., 54
- Soares, R.**
—; Gouzien, P.; Meszaros, S.: A Novel Very Wideband 2-Port S-Parameter Calibration Technique, 210
- Souza, J. R.** See Zabeu, A. C. P., 298
- Stacy, J.** See Kasemset, D., 335
- Stephan, K. D.** See Shillue, W. P., 414
- Stoeva, A.** See Urshv, L., 341
- Stonebraker, J. T.** See Elcrat, A. R., 98
- Suh, K.-W.**
—; Kim, S.-Y.; Ra, J.-W.: A New Spatial Slice Theorem for Microwave Imaging, 362
- Taalbi, M.**
—; Ishii, T. K.: Anomalous Acousto Optic Effects in Acrylic Plastics, 303
- Tam, W. Y.**
—; Luk, K. M.: Spectral Domain Analysis of Microstrip Antennas with an Airgap, 391
- Tan, C.-H.**
—; Chang, T.-N.: Analysis of the Microstrip-Like Transmission Lines with Finite Metallization Thickness, 268
- Tantod, S.** See Willems, D., 111
- Temcamani, F.**
—; Crosnier, Y.; Lippens, D.; Salmer, G.: Modeling and Experimental Study of Breakdown Mechanisms in Multichannel AlGaAs/GaAs Power HEMTs, 195
- Tewari, R.**
—; Singh, H.; Pal, B. P.: An Accurate Numerical Technique for the Analysis of ARROW Waveguides, 305
- Todaro, M.** See Betti, S., 141
- Thomas, S.** See Uhing, J., 290
- Tripathi, V. K.** See Kollipara, R. T., 4
- Tsang, L.** See Lou, S. H., 150
- Tsay, J.**
—; Schwarz, S. E.; Raman, S.; Smith, J. S.: Multidomain Gunn Diodes, 54
- Turi, L.** See Kuti, Cs., 193
- Uher, J.**
—; Hoefer, W. J. R.: Computation of Microwave S-Parameters with the Symmetrical Condensed Node 3D-TLM Method, 411
- Uhing, J.**
—; Thomas, S.; Christodoulou, C. G.: A Statistical Approach for

- Calculating the Concatenated Fiber-Optic Links, 290
- Urshev, L.**
—; Stoeva, A.: Application of Equivalent Transmission Line Concept to the Method of Lines, 341
- Vescovo, R.**
—; Corzani, T.: Characteristic Modes for Nonconducting Bodies Having Mutually Orthogonal Symmetry Planes, 124
- Viergutz, B. J.** See Romanofsky, R. R., 117
- Viitanen, A. J.**
—; Lindell, I. V.; Sihvola, A. H.: Polarization Correction of Luneburg Lens with Chiral Medium, 62
- Viitanen, A. J.**
Polarization Correction of Gutman Lens with Chiral Medium, 136
- Vilcot, J. P.** See Elkadi, H., 379; Gouy, J. P., 47
- Wahid, P. F.** See Rollman, J. A., 273
- Wang, B.-z.**
—; Lin, W.: A UTD Formula for *H*-Polarization Plane Wave Diffraction by a Wedge with Impedance Faces, 356
- Wang, Y.-C.** See Chang, H.-c., 296
- Wang, J.** See Wu, C., 400
- Wang, Y. M.**
—; Chew, W. C.: An Efficient Algorithm for Solution of a Scattering Problem, 102
—; See Chew, W. C., 164
- Wanuga, S.** See Kasemset, D., 335
- Wartak, M. S.** See Bernard, J. E., 427
- Wheeler, J. E.** See Nevels, R. D., 90
- Willems, D.**
—; Bahl, I.; Pollman, M.; Coluzzi, M.; Tantod, S.; Andricos, C.: A Variable-Gain Constant-Phase Dual Gate Amplifier with Series Feedback, 111
- Williams, J. T.** See MacDonald, A. D., 221
- Wolfe, J. C.** See MacDonald, A. D., 221
- Wosik, J. L.** See MacDonald, A. D., 221
- Wu, C.**
—; Wang, J.; Fralich, R.; Litva, J.: A Rigorous Analysis of an Aperture-Coupled Stacked Microstrip Antenna, 400
- Wu, S.** See Cheng, F., 24
- Wu, T.-K.**
Dielectric Properties Measurement of Substrate and Support Materials, 283
- Xu, X.** See Cheng, F., 24
- Xu, Y.**
—; Bosisio, R. G.: Calculations on the Increased Sensitivity of Dielectric Constant Measurements Using Open-Ended Coaxial Line with a Hemispherical Center Conductor Extension, 74
—; See Karam, M., 181
- Xue, L.** See Huang, Y., 157, 208
- Yan, L.** See Kuti, Cs., 193
- Ye, P.** See Zhang, J., 19
- Yizun, W.** See Kejian, G., 122
- Yu, F. T. S.** See Cheng, F., 24
- Zabeu, A. C. P.**
—; Souza, J. R.: The Stability of Nonlinear TE_1 Guided Waves Revisited, 298
- Zhang, J.**
—; Ye, P.: Frequency Chirping in Semiconductor-Optical Fiber Ring Laser, 19
- Zhang, L.**
—; Liu, L.: Optoelectric Implementation of Local Cellular Logic with Polarization Coding, 242
- Zhang, X.**
—; Jiang, P.: Differential Detection of Optical Heterodyne DPSK Communication Systems with Intersymbol Interference, 313
- Zheng, D.**
—; Michalski, K. A.: Analysis of Arbitrarily Shaped Coax-Fed Microstrip Antennas—A Hybrid Mixed-Potential Integral Equation Approach, 200
- Zimmerman, M.**
—; Lee, S. W.; Houshmand, B.; Rahmant-Samii, Y.; Acosta, R.: A Comparison of Reflector Antenna Designs for Wide-Angle Scanning, 233

Subject Index to Volume 3

- Aberrations, 375
- Acoustic wave, 193
- Acousto optic effect, 303
- Acrylic plastics, 303
- Active arrays, 414
- Adaptive arrays, 21
- Amplifier gain, 273
- Anomalous effect, 303
- Antenna feed, 79, 263, 286
- Antenna mode, 6
- Antennas, 17, 136
- Arbitrary shape scatters, 102
- Array, 199
- ARROW waveguide, 305, 427
- Asymptotic expansions, 439
- Attenuation, 160
- Avalanche, 60
- Avalanche photo detector, 113
- Bandpass filters, 212
- Bandwidth of waveguides, 347
- Beam interaction, 217
- BEM, 347
- Bias stabilization network, 273
- Block diagonalization, 124
- Body of revolution, 146
- Broadband design, 119
- CAD, 341
- Calibration techniques, 210
- Cascaded grating, 372
- Caustic, 375
- Characteristic impedance, 85, 119, 191
- Chromatic dispersion, 427
- Circuit, 98
- Circuit optimization, 244
- Cluster feed, 233
- Coaxial line antenna, 90
- Cole-Cole's circular arc law, 416
- Complex modes, 439
- Complex permittivity, 11
- Compound semiconductors, 386
- Computer aided analysis, 13
- Computerized tomography, 362
- Concatenated connector loss, 290
- Conductor loss, 389
- Convolutional codes, 406
- Convolution-backprojection, 362
- Coordinate transformation, 176
- Coplanar waveguides, 389
- Coupled microstrip lines, 338
- Coupled-mode theory, 296
- Coupler, 181
- Couplers, 70
- Coupling efficiency, 404
- Coupling integral evolutions, 439
- Coupling loss, 214
- Coupling wave, 144
- Crosstalk, 141, 229, 338
- Current, 98
- Cutoff attenuator, 95, 424
- Cutoff frequencies, 294
- Cylindrical waveguide, 95, 424
- Cylindrical waveguide with harmonically varying radius, 359
- Delay, 98
- Detectors, 1
- Device breakdown, 195
- Device modeling, 195, 343
- Dielectric constant, 283
- Device simulation, 54
- Dielectric constant measurement, 90
- Dielectrics, 85
- Dielectric sphere, 176
- Dielectric substrate, 283
- Dielectric waveguides, 294
- Diffraction, 327
- Digital integrated circuits, 4
- Diode lasers, 260
- Dipole antenna, 6, 396
- Directional coupler, 88
- Dispersion, 268, 341
- Dispersion characteristics, 419
- Dispersive media, 203, 416
- Displacement sensing, 27
- Distributed amplifiers, 51, 354
- Distributed feedback, 144
- Distributed feedback laser, 372
- Domain, 130
- Dual-gate amplifier, 111
- Dual-polarized arrays, 17
- Eigenvalue equation for the modes, 124
- Electromagnetic compatibility, 235
- Electromagnetic interference, 235
- Electromagnetic scattering, 102, 150
- Electronic polarization, 203
- Electrooptic device, 83
- Electrostatics, 176
- EM wave, 433
- E-probe transition, 172
- Experimental method, 66
- FET amplifier, 244
- FET oscillators, 317
- FETs, 51
- Fiber laser, 19
- Fiber-optic link loss, 290
- Fiber-optic sensor, 27
- Filters, 205, 370
- Finite difference method, 150
- Finite-difference-time-domain(FD-TD) method, 203, 416
- Finite element method, 150
- Finite-difference, 154
- Finite-difference techniques, 146
- Finlines, 157
- Fourier optics, 276
- Fourier transform, 24
- Frequency, 98
- Frequency chirping, 19
- Frequency division multiplexing, 141
- Frequency response, 95, 424
- GaAs monolithic, 382
- GaAs substrate, 118
- GaAs technology, 70
- Gaussian distribution, 27
- Generalized characteristic equation, 208
- Geometrical optics, 62, 136, 327
- Geometrical theory of diffraction, 356
- Green's function, 130
- GRIN, 430
- Guided waves, 298
- Gunn diodes, 54
- Half-wave resonators, 205
- Hankel domain analysis, 391
- Harmonic balance, 13
- Harmonic balance techniques, 317
- Harmonic distortion, 260
- Harmonic generation, 386
- Harmonic suppression, 212
- HEMTs, 350
- High power amplifier, 244
- High power system, 263
- High speed modulator, 83
- High-speed photodetectors, 335
- High T_c , 49
- Hot electrons, 386
- Illuminated semiconductor panel, 42
- Image processing, 24
- Image quality, 276, 375
- Impedance matching, 249, 310, 384
- Impedance surface, 356
- Inflected surface, 327
- Inhomogeneous scatterer, 164
- Input impedance, 396
- Insertion loss, 95, 424

- Integral equations, 200, 393
- Integrated optics, 83
- Interconnect, 229
- Interconnections, 338
- Interdigital capacitor, 127
- Interferometric sensor, 427
- Interinjection-locked oscillators, 414
- Inverted configuration, 66
- Iteratively effective index method, 419
- Joint transform processor, 24
- Junction capacitance, 38
- Lanthanum aluminate substrates, 11
- Laser beam, 303
- Laser diode, 144
- Laser phase noise, 141
- Leaky-wave antenna, 435
- Lens, 136
- Light modulator, 193
- Linear arrays, 106
- Linear systems, 430
- Linewidth, 144
- Local cellular logic, 242
- Loss tangent, 283
- Lossy cover-layer, 31
- Lossy substrate, 439
- Low noise, 384
- Low temperature microwave measurements, 118
- Luneburg lens, 62
- Magnetic line-source, 31
- Measurement, 398
- Measurement techniques, 283
- MESFET, 60, 111, 154, 343, 354
- Method of moments, 90, 200
- Microlens, 214
- Microstrip, 17, 88, 119, 191, 199, 229, 268, 435
- Microstrip antennas, 66, 79, 169, 200, 391, 400
- Microstrip circuits, 366
- Microstrip line, 118, 341, 370
- Microstrip patch, 31
- Microstrip radiator, 177
- Microstrip resonator, 177
- Microwave amplifier, 384
- Microwave circuits and systems, 85, 249, 433
- Microwave components, 205
- Microwave filters, 212
- Microwave hyperthermia, 177
- Microwave imaging, 362
- Microwave integrated circuits, 235
- Microwave lines, 235
- Microwave measurements, 11, 210
- Microwave-optical interactions, 335, 350
- Microwave phase-shifter, 382
- Millimeter wave, 1, 42, 88
- Millimeter wave generation, 386
- Millimeter-wave oscillators, 414
- Minimax optimization, 286
- MMIC, 4, 60, 111, 354
- MMICs, 210
- Mode converter, 224, 359
- Mode locking, 335
- Modeling, 379
- Mode matching, 286
- Mode-matching method, 79
- Modified design, 359
- Modified scheme, 154
- Moment method, 124, 362, 396
- Monolithic MIC, 70
- Monopulse, 106
- Monte Carlo simulations, 150
- Multiconductor lines, 4
- Multicoupled transmission lines, 308
- Multiple scattering, 256
- Narrow inclined slot, 133
- Negative resistance, 317
- Noise, 47
- Nondiffracting modes, 430
- Nonlinear Brewster angle, 239
- Nonlinear microwave circuits, 13
- Nonlinear optics, 239, 279, 298
- Nonuniform interelement spacings, 106
- Normal mode analysis, 366
- Notion of quasicomplex modes, 439
- Numerical method, 102, 164, 203, 305, 347, 393, 416
- 1 dB compressed output power, 273
- Optical beam coupling, 217
- Optical communication, 113, 141
- Optical communications, 116, 260, 313, 406
- Optical computing, 21
- Optical data processing, 21
- Optical effects, 350
- Optical fibers, 116, 122, 160, 430
- Optical hybrid, 122
- Optical multi/demultiplexers, 116
- Optical waveguides, 296, 305
- Optimization, 224
- Optoelectronics, 47, 379
- Orientation polarization, 416
- Oscillators, 54
- Parallel coupled lines, 308
- Parameter degradation, 388
- Parasitic mode, 224, 359
- Passive MMICs, 127
- Patch antenna, 199
- Periodic structure, 370
- Perturbation theory, 366
- Phase diversity receiver, 122
- Phase matched at total reflection, 239
- Phase matching, 279
- Phase modulator, 49
- Phase shift, 372
- Phase shifter, 263
- Photo-detection, 60
- Photodiodes, 47
- Photon-photon interaction, 303
- Photorefractive two-wave mixing, 217
- Physical optics, 327
- Piezoelectrically induced strain-optic effect, 193
- Planar circuits, 341
- Planar transmission lines, 208
- Polarization, 62, 122, 136
- Poisson equation, 130
- Polarization coding, 242
- Power divider, 127
- Power HEMT, 195
- Probability function for connector loss, 290
- Propagation constant, 435
- Pulse position modulation, 113, 406
- Pulse propagation, 338
- Q-factor, 118
- Quality factor, 38
- Quasioptical oscillators, 414
- Radar absorbing materials, 324
- Radar cross section, 6, 324
- Radial wave, 169
- Radiated susceptibility, 235
- Radiation efficiency, 31
- Ray tracing, 375
- Receivers, 313
- Rectangular dielectric waveguides, 419
- Rectangular waveguide sidewall, 133
- Reduction of radar cross section, 324
- Reflection, 98
- Reflection coefficient, 356
- Reflectometer, 398
- Reflector antenna(s), 233, 263, 310
- Regular solution, 208
- Relative permittivity, 118
- Resistive and reactive loading, 224
- Resonance frequencies, 66

- Resonant tunnelling diodes, 1
- Resonators, 118, 221
- Ridged circular waveguide, 347
- Ring type power divider, 119
- Rough surface scattering, 150
- Sampling theorem, 13
- Scattering, 6, 164, 327
- Schottky contact coplanar waveguide, 382
- Second harmonic generation (SHG), 239, 279
- Semiconductor devices, 388
- Semiconductor laser, 19, 214, 379, 404
- Series resistance, 38
- Serpentine Cylindrical waveguide, 224
- Shift-keying modulation, 313
- Short-haul fiber-optic link loss, 290
- Signal detection, 313
- Signal flow chart, 343
- Signal processing, 362
- Single-mode fiber, 214, 404
- Singular integral equation, 157, 208
- Six-port, 398
- Slow-wave, 382
- Small-signal analysis, 19, 154, 343
- Solid-state laser, 335
- Source models, 396
- S-parameter computation, 411
- Space-variant imaging, 276
- Spectral domain, 400
- Spectral domain approach, 439
- Spectral domain techniques, 4
- Spiral inductor, 411
- Stored power, 133
- Stripline, 221
- Structural mode, 6
- Superconducting electronics, 49
- Superconductors, 11, 49, 221, 338
- Surface resistivity, 221
- Surface wave, 169
- Surface-wave power, 31
- Suspended stripline, 181, 268, 433
- Suspended-substrate, 66
- Symmetry and antisymmetry, 124
- Systems and applications, 276, 375
- Tapered antennas, 249
- Tapered sections, 70
- TE₀₁ mode, 95
- TEM waves, 388
- Thick microstrips, 4
- Three coupled lines, 308
- TLM method, 411
- TM₀₁ mode, 424
- Transmission characteristics, 433
- Transmission line, 229
- Transmission lines, 85, 249
- Transmission modal analysis, 268
- Travelling-wave devices, 51
- Traveling-wave antenna, 435
- Tuning, 372
- Two coupled lines, 308
- 2-D device simulation, 154
- Two intersecting spheres, 130
- Two-section feed network, 106
- Uniaxial crystal, 239, 279
- Uniform asymptotic theory, 324
- Varactor diodes, 38
- Variational method, 79
- Variational methods, 160
- Vector analysis, 256
- Wave-front aberrations, 276
- Waveguide components, 411
- Waveguide-to-microstrip transformer, 172
- Waveguide-to-microstrip transition, 172
- Wave propagation, 256, 430
- Wedge, 356
- Wide-angle scan, 233
- Wideband component, 181
- Wire antennas, 393